

### Abstract

A method and apparatus are provided for generating first and second modulation signals from a local oscillator signal for quadrature subharmonic modulation of a quadrature amplitude modulated information signal. 5 The method includes the steps of delaying the local oscillator signal in a plurality of incremental odd and even delay steps to form respective sets of odd and even modulator signals, said odd set of modulator 10 signals together forming the first modulation signal and said even set forming the second modulation signal for quadrature subharmonic modulation of the quadrature amplitude modulated information signal and controlling a magnitude of the incremental delays based upon a 15 predetermined phase offset between the local oscillator signal and a last delay step of the incremental delay steps.